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ABSTRACT

As part of an intensive study of college student satisfaction a questionnaire has been designed to measure six dimensions of student satisfaction: policies and procedures, working conditions, compensation (relationship of input to outcomes), quality of education, social life, and recognition. A field test of this instrument, the College Student Satisfaction Questionnaire (CSSQ), indicates that the six scales are internally consistent, and provides some support for their construct validity. The inter-scale correlations were found to be higher than desirable. Analyses of covariance across the CSSQ scales indicate that type of residence and year in school, but not sex differences, are related to several aspects of college student satisfaction. Generalization from the present study is limited because the sample was drawn solely from Iowa State University and was not completely randomized. However, the results of this study suggest that the CSSQ is a potentially useful measure. Data from another university is now being analyzed and further studies are planned. (DG)

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THE MEASUREMENT AND ANALYSIS OF COLLEGE STUDENT SATISFACTION

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Studies of college and student characteristics have proliferated in recent years in an effort to measure and understand student attitudes and college adjustment. A number of well-developed instruments are available for the study of such variables as the college environment (Pace, 1963; Astin, 1963), student needs (Stern, 1963), and student-environment congruence (Pervin, 1967 a,b). In contrast, however, there has been a dearth of systematic research focusing on college student satisfaction. Relatively little progress has been made toward developing and evaluating measures of college student satisfaction, or toward understanding the nature of student satisfaction, the components, correlates, causes of effects of this ever-present campus variable.

In one of the few published studies of college student satisfaction, Berdie (1944) investigated relationships between engineering students' "curricular satisfaction" and such performance measures as first year honor point ratio, high school grades, and scores on a series of ability tests. Berdie's satisfaction measure was an adaptation of Hoppock's (1935) Job Satisfaction Blank, with the satisfaction score based on the sum of responses to four items. Only one of eight performance measures, high school rank, was found to have a significant relationship with curricular satisfaction. In the same study, Berdie investigated correlations between satisfaction and masculinity-femininity, occupational level, and appropriateness of interest patterns. The results for masculinity-femininity and occupational level were not significant, but there were indications of a relationship between appropriateness of interest scores and curricular satisfaction.

Pervin (1967a, b) and Pervin and Rubin (1967) assessed students' perceived congruence with their environment as a predictor of college student satisfaction, using single items to measure separate aspects of satisfaction. These studies supported the investigators' hypothesis that discrepancies between students' perceptions of themselves and their colleges are related to dissatisfaction with college.

Rand (1968) investigated relationships between college student satisfaction and deviations from an institutional mean on measures of interests, abilities and subcultural orientation. The satisfaction measure consisted of a single item on a 3-point response scale. Rand found some significant relationships between individual-environment similarity and student satisfaction, but concluded overall that the relationship appears to be minimal and quite complex.

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In general, the findings of the few existent studies of college student satisfaction in the major research literature provide little basis for conclusions or generalization. For the most part, measurement of college student satisfaction has been based upon instruments of unknown or limited psychometric quality; there has been no systematic research on college student satisfaction as a significant variable per se.

The present research is part of a project directed at the intensive study of college student satisfaction. It is based on the premise that the study of college student satisfaction can draw upon principles and methods which have resulted from years of research on the satisfaction of employees in business and industry (e.g., Herzberg, Mausner, Peterson & Capwell, 1957; Hoppock, 1935; Vroom, 1964). The purpose of the present paper is to describe the development and current status of an instrument, the College Student Satisfaction Questionnaire (CSSQ), designed to measure college student satisfaction as an analogue to job satisfaction, and to report initial findings regarding relationships between aspects of student satisfaction and three demographic variables in the typical college or university setting: sex, type of residence, and year in college.

Method

Instrumentation

The CSSQ was designed to measure six dimensions of college student satisfaction selected on the basis of job satisfaction research regarding components of satisfaction (e.g., Herzberg, et al., 1957) and also considering possible additional variables unique to the college setting. The six selected dimensions were:

Policies and Procedures - Those policies and procedures that affect the student's activities and progress, such as choice of classes, use of free time, opportunities to influence decisions affecting student welfare.

Working Conditions - The physical conditions of the student's college life, such as the cleanliness and comfort of his place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes.

Compensation - The amount of input (e.g., study) required relative to academic outcomes (e.g., grades), and the effect of input demands on the student's fulfillment of his other needs and goals.

Quality of Education - The various academic conditions related to the individual's intellectual and vocational development, such as the competence and helpfulness of faculty and staff, including advisors and counselors, and the adequacy of curriculum requirements, teaching methods, assignments.

Social Life - Opportunities to meet socially relevant goals, such as dating, meeting compatible or interesting people, making

friends, participating in campus events and informal social activities.

Recognition - Attitudes and behaviors of faculty and students indicating acceptance of the student as a worthwhile individual.

The initial CSSQ was a 139-item instrument, developed from a pool of items thought to be representative of the six selected satisfaction dimensions. Format was a 5-choice Likert-type response alternative, modeled after the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967), a measure of job satisfaction. The five response alternatives ranged from "Very dissatisfied" through "Satisfied" to "Very satisfied", scored one to five points respectively. Scale scores were based on the sum of item responses.

After an initial administration of the instrument to 643 Iowa State University students in the fall of 1968, and analysis of the resulting data, a 92-item revised form was developed. The number of items in the six scales varied from 13 to 17.

Using the average interitem correlation method (Menne & Klingensmith, 1969), internal consistency reliability coefficients for each of the six scales were calculated, using data from the 139-item administration. The reliabilities ranged from .85 to .92, with a median of .88. Scale score distributions were found to be relatively normal. Correlations between scales ranged from .39 (Social Life and Compensation) to .77 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

Subjects

Participants in the present study were 463 students attending Iowa State University during the winter quarter of 1969. The 92-item College Student Satisfaction Questionnaire (CSSQ) was administered at regular house meetings in dormitories, fraternities and sororities, chosen at random from a listing of all organized university residences. The resulting group included 297 male and 166 female students. Of these, 149 men and 112 women lived in university dormitories, 148 men were fraternity residents, and 54 women lived in sororities. The total group was comprised of 162 freshmen, 124 sophomores, 115 juniors, and 62 seniors.

Students in all groups were asked to give identifying personal information, with the assurance that results would be treated with complete confidentiality, and used for research purposes only.

Analysis

Scale reliabilities, distribution of scale scores, and correlations between scales were re-calculated for the new 92-item CSSQ data. The unique effect of each of the three demographic variables (sex, type of residence, and year in school) on scale scores of the CSSQ was evaluated by analysis of covariance. In a series of analyses, the variance attributable to each demographic variable was assessed separately, after removal of variance due to the two remaining variables treated as covariates.

Results

Results of the analyses of CSSQ scale characteristics closely followed the findings from analyses of the earlier CSSQ data. Internal consistency coefficients ranged from .85 to .91, with a median of .88. Again, scale score distributions were relatively normal. Correlations between scales ranged from .36 (Working Conditions and Compensation) to .80 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

The results of the analysis of covariance studies are shown in Tables 1 through 6. Table 1 shows the intercorrelations of the three demographic variables with each other and with the six scale scores. Tables 2 through 6

Insert Table 1 about here

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show those results of the analyses of covariance which indicated significant relationships between a demographic variable and the separate scales.[1] In each table, the results of the total regression of the three demographic variables on the indicated CSSQ scale scores are shown opposite the term, "Regression." The adjusted regression values represent the effect of the indicated demographic variable alone, after subtraction of the effects of the covariates from the total regression effects.

Insert Tables 2 through 6 about here

The correlations shown in Table 1 indicate a high relationship between sex and residence, and low correlations between the demographic variables and scale scores, with the exception of the Social Life scale, which had moderately high correlations with both sex and type of residence.

The results of the analyses of covariance for the Policies and Procedures scale, shown in Table 2, include significant F-ratios for the effects attributable both to type of residence and year in school. The effects related to sex differences were not significant. For the Working Conditions scale, shown in Table 3, a significant F-ratio resulted for variance due to type of residence, but not for year in school or sex. Significant F-ratios resulted on the Compensation scale for both residence and year in school (see Table 4), but not for the sex variable. Similar findings resulted for the Quality of Education scale, shown in Table 5, and the Social Life scale, shown in Table 6; that is, significant relationships were indicated for both type of residence and year in school, but not for sex. Analyses of covariance on the Recognition scale resulted in no significant findings for any of the three variables, separately or combined.

In accordance with the recommendations of Hays (1963) and others, that data resulting in significant F-tests be additionally analyzed to determine the strength of the indicated association, estimated variance components were calculated and are shown in Tables 2 through 6. The variance components were relatively low, the highest for a single variable being 9.3 per cent, for the effect of type of residence on satisfaction with working conditions.

The direction of differences for the various groups and scales are suggested by group means shown in Table 7 for type of residence, and in Table 8 for year in school. (Since the number of items per scale varies from 13 to 17, scores across scales are not directly comparable.) In general, satisfaction of fraternity and sorority residents appears higher, as

Insert Tables 7 and 8 about here

might be expected, on the Working Conditions scale, and, for men, on the Social Life scale. Dormitory residents appear to express greater satisfaction than do fraternity and sorority students on the Policies and Procedures, Compensation, and Quality of Education scales. Differences for year in school are less readily interpretable, but possibly suggest a downward trend, with freshmen typically scoring highest on the various satisfaction scales.

Discussion

The results of the present study indicate that the College Student Satisfaction Questionnaire is an internally consistent measure of several dimensions of college student satisfaction. Some support for the construct validity of the scales is suggested by the results, although further research will be necessary to produce adequate evidence regarding the validity of the several CSSQ scales and to refine the measures generally. In particular, the inter-scale correlations are higher than desirable, especially those between the Policies and Procedures, Quality of Education and Compensation scales. Factor analytic studies are currently underway to evaluate the logically-derived scales in the light of statistically determined components of college student satisfaction.

The results of the analyses of covariance across the six CSSQ scales indicate that type of residence and year in school are related to several aspects of college student satisfaction, while sex differences seem to have little, if any, relationship with satisfaction on any of the measured dimensions after the effects of year and residence are removed.

Perhaps the most interesting finding is that type of residence seems to be related to satisfaction with academic aspects of college as well as with working conditions and social life. It is perhaps not surprising that sorority and fraternity students indicated greater satisfaction with working conditions and social life than did dormitory students, since fraternities and sororities have for years worked diligently to offer special opportunities in these areas. However, the generally lower scores of fraternity and sorority residents, as compared with dormitory residents, on three academically-oriented scales (Policies and Procedures, Compensation, Quality of Education) suggests the operation of a related, although as yet unidentified, factor of importance in regard to college student satisfaction. The relationships between type of residence and the academic satisfaction scores may, for example, be due to a selection factor operating in student choice of residence, or to some other factor, such as group leadership differences; the present study gives no indications of an answer to this question.

The findings regarding the relationship between year in school and satisfaction with specific aspects of college life might also have been anticipated by persons in close contact with student attitudes and activities. The results do not clearly indicate the direction or pattern of satisfaction changes over the college years; this is a question which can be clarified only with further study.

An indication of the probable complexity of college student satisfaction is provided by the low variance components derived in the present study. Thus, while type of residence and year in school were found to be related to aspects of satisfaction, the unexplained remaining variance was of major proportions and points to the need for extensive research to develop an understanding of college student satisfaction.

An additional limitation of the present findings is the specificity of the student group studied, being comprised entirely of Iowa State University students, and without complete randomization. Data on student satisfaction at a second university has now been collected and is being analyzed. This second sample marks the beginning of a series of studies across a number of colleges and universities in order to determine the generalizability of findings on college student satisfaction.

Overall, however, the results of the present study support the CSSQ as a potentially useful measure of college student satisfaction, and suggest numerous meaningful areas for future research.

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Footnotes

[1]Tables for the remaining analyses may be obtained by writing to the senior author.

Table 1

Correlations Between Sex, Year, Type of Residence and CSSQ Scale Scores for 463 University Students

Variable	Sex	Year	Residence
Policies and Procedures	-.05	-.12	-.04
Working Conditions	.00	-.06	.16
Compensation	-.02	-.05	-.06
Quality of Education	.01	-.16	-.12
Social Life	-.37	-.05	.38
Recognition	-.11	.01	.07
Sex		-.09	-.82
Year			.16

Table 2

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Policies and Procedures (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2027.43	7	289.63	3.92**	5.7%
Covariates (sex, year)	(-)	1018.50	4			2.9
Adjusted regression (residence)		1008.93	3	336.31	4.55**	2.8
Covariates (sex, residence)	(-)	1398.30	4			3.9
Adjusted regression (year)		629.13	3	209.71	2.84*	1.8
Residual		33629.55	455	73.91		

[a]Estimated variance component

*$p < .05$

**$p < .01$

Table 3

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Working Conditions (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2704.37	7	386.34	6.94***	9.6%
Covariates (sex, year)	(-)	95.18	4	23.80		0.3
Adjusted regression (residence)		2609.19	3	869.73	15.62***	9.3
Residual		25336.95	455	55.69		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 4

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Compensation (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		1479.89	7	211.41	2.91**	4.0%
Covariates (sex, year)	(-)	824.60	4			2.4
Adjusted regression (residence)		655.29	3	218.43	3.01*	1.6
Covariates (sex, residence)	(-)	708.71	4			2.0
Adjusted regression (year)		771.18	3	257.06	3.54*	2.0
Residual		33069.78	455	72.68		

[a]Estimated variance component
*p < .05
**p < .01

Table 5

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Quality of Education (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2914.30	7	416.33	4.19***	6.1%
Covariates (sex, year)	(-)	1413.31	4			2.9
Adjusted regression (residence)		1500.99	3	500.33	5.03**	3.2
Covariates (sex, residence)	(-)	1911.96	4			4.0
Adjusted regression (year)		1002.34	3	334.11	3.36*	2.1
Residual		45219.57	455	99.38		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 6

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Social Life (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		11483.81	7	1640.54	14.60***	18.3%
Covariates (sex, year)	(-)	9327.26	4			14.9
Adjusted regression (residence)		2156.55	3	718.85	6.40***	3.4
Covariates (sex, residence)	(-)	10344.25	4			16.5
Adjusted regression (year)		1139.56	3	379.85	3.38*	1.8
Residual		51140.01	455	112.40		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 7

Mean Satisfaction Scores and Standard Deviations for Students Grouped by Type of Residence

Scale	Male Dormitories (N = 149)		Female Dormitories (N = 112)		Fraternities (N = 148)		Sororities (N = 54)	
	M	SD	M	SD	M	SD	M	SD
Policies and Procedures	41.52	9.14	43.24	8.04	39.72	8.59	38.39	8.73
Working Conditions	33.66	7.71	35.49	6.95	39.10	7.27	38.13	8.33
Compensation	40.52	8.81	40.19	8.64	37.78	8.64	38.30	7.65
Quality of Education	53.19	10.59	52.47	9.03	49.21	10.21	48.02	9.94
Social Life	45.40	10.01	56.79	10.01	50.50	11.08	56.63	12.62
Recognition	46.19	8.59	48.64	7.53	45.84	8.28	46.72	9.56

Table 8

Mean Satisfaction Scores and Standard Deviations for Students Grouped by Year in College

	Freshmen (N = 162)		Sophomores (N = 124)		Juniors (N = 115)		Seniors (N = 62)	
	M	SD	M	SD	M	SD	M	SD
Policies and Procedures	42.88	8.56	39.76	7.79	39.97	9.06	40.44	10.03
Working Conditions	36.81	7.97	36.43	7.77	36.20	7.47	35.39	8.02
Compensation	40.04	8.76	38.12	8.15	40.75	7.95	37.06	9.93
Quality of Education	53.38	9.55	50.22	9.65	50.42	10.26	48.48	11.86
Social Life	52.42	12.43	49.10	10.98	52.27	11.39	49.45	10.72
Recognition	46.94	7.65	45.98	7.57	47.25	8.91	46.73	10.77